REMARKS

Claims 1, 32, and 59 have been amended. Claims 17, 28, 31, and 33-58 have been canceled. Claims 60-65 have been added. As a result, claims 1-16, 18-27, 29, 30, 32, and 59-65 are pending in the application. Reconsideration of this application is respectfully requested in view of the amendments and the remarks that follow.

Claim 1 has been amended in several ways. The preamble has been simplified by eliminating unnecessary verbiage. The body of the claim after the transition has been divided into subparagraphs for ease of reading. The subject matter of claim 17 has been incorporated into the first subparagraph to require the thermoplastic polymer material to be oriented. Next, the original "wherein" clause has been reworded to make it clear that the percent transmission and haze conditions are associated with the presence of the particulate pigment. The upper limit on the percent transmission has been changed from 90% to 80%. For support, see e.g. the Examples beginning on page 21 of the specification (ranging from a low of about 13% transmission for Example 12 to a high of about 80% for Example 4). Finally, an additional "wherein" clause has been added to require the optical body to be a tinted film suitable for application to a base substrate, such as a window or auto glass pane. For support, see e.g. page 1 lines 13-16 of the specification. No new matter has been added.

Claim 32 has been amended to depend from claim 1. No new matter has been added.

Claim 1 as amended includes the limitations of original claim 17. In the Office Action, claim 17 was rejected as anticipated or obvious in view of U.S. Pat. 4,865,898 (Fukuda et al.) and U.S. Pat. 6,049,419 (Wheatley et al.). Applicants respectfully submit that the rejection cannot be sustained against amended claim 1. Fukuda et al. is directed to a polyester film for magnetic recording media. Among other things, the film is required to have excellent light-shielding properties at 900 nm so that the magnetic tape can be optically detected using a 900 nm light source. See e.g. columns 1-2 of Fukuda et al. As such, the presence of haze in Fukuda et al.'s polyester film would be *desirable* from an optical standpoint, since the increased scattering associated with the haze would help block light more effectively than a low-haze film. The Office Action states that the claimed properties of haze and visible spectrum transmission would be inherently met in Fukuda et al.'s film because the exact same materials are disclosed in the same amounts as those of the instant application. However, even assuming that the exact same

materials are disclosed by Fukuda et al., Applicants wish to point out from extensive film-making experience that the optical properties of a pigmented film can be very sensitive to the details of manufacture, particularly the manner in which the particulate pigment is introduced into the polymer. Specifically, Applicants have found that—even with an appropriate amount of suitably sized particulate pigment—mixing or milling the particulate pigment into an already polymerized polyester (as is done in the examples of Fukuda et al., see the bottom of column 9) produces films that are much more hazy than films in which the particulate pigment is carefully added (e.g. in a well dispersed pigment slurry, to minimize agglomeration of the particles) to the reaction mass *before* polymerization. (See e.g. page 3 lines 4-14 and page 14 line 27 to page 17 line 22 of the present specification.) Great care is required to achieve the claimed low haze values. Therefore, the films described in Fukuda et al. would not be expected to exhibit an internal haze of less than or equal to about 5%, as set forth in claim 1. Nor would there be any motivation to modify the films to be of such low haze, since as mentioned above higher haze would assist the light shielding function described as desirable by Fukuda et al.

With regard to Wheatley et al., although the Examiner correctly notes discussion in that reference regarding the use of dyes or pigments, the discussion is of a fairly general nature. As explained above, even if the disclosed particle size and concentration of the pigment is appropriate, the haze of the resulting article can be unacceptably high depending upon the method of incorporating the pigment. Moreover, the visible light transmission associated with the pigment is not only a function of concentration but also of the thickness of the pigmented layer(s) and of the type of pigment used. Thus, Wheatley et al. do not inherently teach or suggest the transmission or haze limitations found in amended claim 1.

Hence, the rejection of claim 1, together with its dependent claims 2-16, 17-30, and 32 should be withdrawn.

The Office Action also rejected claims 31 and 33-58 on various grounds. Cancellation of those claims renders the rejections thereof moot.

Claim 59 has been amended in several respects. The preamble has been amended to address the Examiner's indefiniteness rejection relating to the inconsistency between article and method. Further, the "tinted film" and "80 percent" terminology discussed in connection with amended claim 1 have also been added. The term "of" in step (d) has been changed to "comprising" to make it clear that the "at least one layer" can be a blend of the condensation

polymer containing the particulate dispersion and a second polymer, as set forth in the examples (see, e.g., film processes A1, A2, B1, B2, C, and D on pp. 17-19 of the specification).

New dependent claim 61 recites this blending technique, and new dependent claim 62 recites that both blended polymers are polyethylene terephthalate in accordance with the example film processes. New dependent claim 60 recites the orienting technique discussed above in connection with claim 1. New dependent claim 63 recites a range of thicknesses for the "at least one layer". The recited range finds support in film processes A1, A2, B1, B2, C, and D on pp. 17-19 of the specification. Film process A1, for example, discloses a single layer film whose sole (pigmented) layer is 0.025 mm thick. Film process A2 discloses a three-layer film whose overall thickness is 0.038 mm, but whose pigmented layer (the "central layer") makes up a fractional part (0.25÷(0.064+0.25+0.064)) corresponding to a finished thickness of about 0.0251 mm. Film process B1 discloses a two-layer film whose overall thickness is 0.10 mm but whose pigmented layer makes up a fractional part (half) corresponding to a finished thickness of about 0.05 mm. Similarly, the finished thickness of the pigmented layer for processes B2, C, and D is disclosed as or can be calculated to be 0.0187 mm, 0.043 mm, and 0.09 mm respectively. Thus, the range of 0.0187 to 0.09 mm recited in new claim 63 is fully supported by the specification. New dependent claims 64-65 find support throughout the specification, and in the claims as filed. No new matter has been added.

The Office Action rejected claim 59 as anticipated or obvious in view of U.S. Patents 4,408,004 (Pengilly), 4,865,898 (Fukuda et al.), and 6,049,419 (Wheatley et al.). Applicants respectfully traverse. Pengilly is concerned with adding very small amounts of infrared absorbing material (less than 10 ppm of carbon black, see col. 4 lines 4-24) to a polyester to reduce infrared heat-up times, without discoloring the polyester article, and thus neither anticipates nor renders obvious claim 59 which requires that the adding step be carried out such that the pigment dispersion is present "in an amount sufficient to impart a transparency to the film between about 10 and 80 percent". Fukuda et al and Wheatley et al. provide no teaching of steps (a) and (b), as explained *supra*, and thus also cannot anticipate or obviate claim 59. The rejection of claim 59 should therefore be withdrawn. New claims 60-65 define additional patentable subject matter, and are submitted to be allowable at least because they depend from claim 59.

CONCLUSION

The claims are believed to be in condition for allowance for the foregoing reasons. Early notification thereof is earnestly solicited.

Beyond the fee for the extension of time authorized above, no additional fee is believed to be due by submission of this paper. If this belief is in error, please charge any required fee to Deposit Account No. 13-3723.

Respectfully submitted,

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ATTACHMENT A

Pending Claims 1, 32, and 59 With Markings to Show Changes Made

1. (Amended) [A color-stable, pigmented] An optical body, comprising:

a single or multiple layer core comprising at least one layer of [a] an oriented thermoplastic polymer material; and

[having dispersed therein] a particulate pigment dispersed in the at least one layer;[,]

wherein the [optical body exhibits] particulate pigment is present in an amount sufficient to provide the optical body with: (a) a transmission of light within a wavelength band of interest within the visible spectrum of from about 10 to about [90] 80 percent, and [exhibits] (b) an internal haze of less than or equal to about five percent; and [internal haze]

wherein the optical body is a tinted film suitable for application to a base substrate.

32. (Amended) [A color-stable, pigmented] The optical body of claim 1, [comprising a single or multiple layer core comprising at least one layer of a thermoplastic polymer material,] wherein the particulate pigment is dispersed within the polymer material [is] at a concentration between 0.01 and about 1.0 percent by weight, and wherein the [of a] particulate pigment [having] has a mean diameter of between about 10 nm and 500 nm[, and wherein the optical body exhibits a transmission of light within a wavelength band of interest within the visible spectrum of from about 10 to about 90 percent].

59. (Amended) A [color-stable, pigmented optical body] method of making a tinted film, the method comprising:

(a) creating a substantially uniform dispersion of a particulate pigment having a mean diameter of between about 10 nm and about 500 nm;

(b) adding the dispersion to a reaction mass of a condensation polymer forming process, wherein the dispersion is present in an amount sufficient to impart a transparency to the [optical body] film between about 10 and [90] 80 percent;

(c) reacting the condensation polymer forming reaction mass to form a condensation polymer having dispersed therein the particulate pigment; and

(d) forming [an optical body] a film comprising at least one layer [of] comprising the condensation polymer.

ATTACHMENT B

Pending Claims After Entry of Amendment–Clean Version

1. (Amended) An optical body, comprising:

a single or multiple layer core comprising at least one layer of an oriented thermoplastic polymer material; and

a particulate pigment dispersed in the at least one layer;

wherein the particulate pigment is present in an amount sufficient to provide the optical body with: (a) a transmission of light within a wavelength band of interest within the visible spectrum of from about 10 to about 80 percent, and (b) an internal haze of less than or equal to about five percent; and

wherein the optical body is a tinted film suitable for application to a base substrate.

2. The optical body of claim 1 further comprising at least one additional layer that is substantially free of particulate pigmentation.

3. The optical body of claim 2 wherein said additional layer is a transparent coating, laminate or film.

4. The optical body of claim 1 wherein said optical body exhibits less than about three percent internal haze.

5. The optical body of claim 1 wherein said optical body exhibits less than about two percent internal haze.

6. The optical body of claim 1 wherein said optical body has a total haze of less than about ten percent.

7. The optical body of claim 1 wherein said optical body has a surface roughness, Ra, of less than or equal to about 60 nm.

8. The optical body of claim 1 wherein said particulate pigment comprises carbon black.

9. The optical body of claim 1 wherein said particulate pigment comprises a material selected from the group consisting of oxides, salts and compounds of iron, titanium, antimony, zirconium, zinc, barium, calcium, cadmium, lead, chromium, molybdenum, manganese, silicon, aluminum, sodium, cobalt, copper, iron oxides, ammonium ferrocyanides, titanium dioxides, antimony oxides, zirconium oxides, zirconium silicates, zinc oxides, zinc sulfides, barium sulfates, calcium carbonates, calcium sulfates, cadmium sulfides, cadmium selenides, lead sulfates, chromium oxides, chromates, molybdates, manganates, silica, silicates, aluminosilicates, sodium alumino sulphosilicates, simple and complex inorganic compounds and inorganic complexes, phthalocyanines, copper phthalocyanines, quinacridones, anthraquinones, perylenes, perinones, dioxazines, diketo-pyrrolo-pyrrols (DPPs), indanthrones, benzidines, isoindolines and isoindolinones, benzimidazolones, azo, disazo, or polyazo pigments, and blends or mixtures thereof.

10. The optical body of claim 1 wherein said thermoplastic polymer material has dispersed within it two or more particulate pigments.

11. The optical body of claim 1 wherein said thermoplastic polymer material has dispersed within it carbon black and at least one blue pigment or dye.

12. The optical body of claim 1 wherein said thermoplastic polymer material comprises a condensation polymer.

13. The optical body of claim 1 wherein said thermoplastic polymer material comprises a polyester.

14. The optical body of claim 1 wherein said thermoplastic polymer material comprises a polyester comprising terephthalate monomer units.

15. The optical body of claim 1 wherein said thermoplastic polymer material comprises a polyester comprising naphthalate monomer units.

16. The optical body of claim 1 wherein said thermoplastic polymer material comprises a polyester selected from the group consisting of polyethylene naphthalate, polyethylene terephthalate, polycarbonates, polyarylates, polybutylene naphthalate, polypropylene naphthalate, polybutylene terephthalate, polypropylene terephthalate, and blends and copolymers of any of the above with each other or with other polymers.

18. The optical body of claim 2 wherein said additional layer comprises an oriented film.

19. The optical body of claim 1 wherein said single or multiple layer core comprises a multilayer optical film.

20. The optical body of claim 1 wherein said additional layer comprises a multilayer optical film.

21. An article comprising the pigmented optical body of claim 1.

22. An infrared mirror comprising the pigmented optical body of claim 1.

23. A window glazing film comprising the pigmented optical body of claim 1.

24. A puncture resistant film comprising the pigmented optical body of claim 1.

25. A solar control film comprising the pigmented optical body of claim 1.

26. A security film comprising the pigmented optical body of claim 1.

27. A contrast enhancement film comprising the pigmented optical body of claim 1.

29. A display device comprising the optical body of claim 1.

30. A traffic sign comprising the optical body of claim 1.

A2

32. (Amended) The optical body of claim 1, wherein the particulate pigment is dispersed within the polymer material at a concentration between 0.01 and about 1.0 percent by weight, and wherein the particulate pigment has a mean diameter of between about 10 nm and 500 nm.

A3

59. (Amended) A method of making a tinted film, the method comprising:

(a) creating a substantially uniform dispersion of a particulate pigment having a mean diameter of between about 10 nm and about 500 nm;

(b) adding the dispersion to a reaction mass of a condensation polymer forming process, wherein the dispersion is present in an amount sufficient to impart a transparency to the film between about 10 and 80 percent;

(c) reacting the condensation polymer forming reaction mass to form a condensation polymer having dispersed therein the particulate pigment; and

(d) forming a film comprising at least one layer comprising the condensation polymer.

60. (New) The method of claim 59, wherein step (d) comprises orienting the at least one layer.

61. (New) The method of claim 60, wherein step (d) comprises blending the condensation polymer with a second polymer to form the at least one layer.

62. (New) The method of claim 61, wherein the condensation polymer and the second polymer are polyethylene terephthalate.

63. (New) The method of claim 60, wherein step (d) comprises forming the film such that the at least one layer has a thickness from 0.0187 mm to 0.09 mm.

64. (New) The method of claim 60, wherein the film has an internal haze of less than or equal to about 5%.

65. (New) The method of claim 60, wherein the particulate pigment comprises carbon black.